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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,579	06/24/2003	Matthew W. Holtcamp	2003U014.US	1215

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EXAMINER	
PASTERCZYK, JAMES W	
ART UNIT	PAPER NUMBER
1755	

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/602,579	HOLTCAMP ET AL.	
	Examiner	Art Unit	
	J. Pasterczyk	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/5/03, 11/17/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *22-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-24* are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/5/03,11/17/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-21, drawn to a catalyst, classified in class 502, subclass 102 et al.

II. Claims 22 and 24, drawn to an olefin polymer, classified in class 525, subclass various depending on the particulars of how it is made.

III. Claim 23, drawn to a polymerization process, classified in class 526, subclass various depending on the particulars of the catalyst used.

2. The inventions are distinct, each from the other because:

Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product, such as a Ziegler-Natta catalyst having a simple aluminum alkyl as a cocatalyst.

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions, one to make polyolefins, the other to serve as a structural material.

Inventions III and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be

made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another materially different process, such as polymerization using a Ziegler-Natta catalyst having a simple aluminum alkyl as a cocatalyst.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Kevin Faulkner, Esq., on 10/25/04, a provisional election was made without traverse to prosecute the invention of group I, claims 1-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 22-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. The specification is objected to because the ancestor cases to the present case have not had their entire status updated to reflect allowance and US patent numbers.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 and 22-35 of U.S. Patent No. 6,703,338. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are related in a species/genus manner to each other.

9. Claims 1-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/058571. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are related in a genus/species manner to each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. However, a Notice of Allowability has been issued in this case, though no Patent Number has yet been assigned or patent issued.

10. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the catalyst being a bis-Cp metallocene, does not reasonably provide enablement for the catalyst being anything else. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Although the specification gives a broad disclosure that the cocatalyst of the present invention may be used with a variety of catalysts, the only ones in fact used in the working examples were conventional early transition metal metallocenes. The range of catalysts claimed to be usable with this cocatalyst is essentially the entire universe of olefin polymerization catalysts that require a cocatalyst. However, all of these catalysts have subtly different modes of operation that could easily be affected by the choice of cocatalyst used. Experimenting by the routineer in the art would have to be quite extensive in order to determine which catalysts are compatible with the cocatalyst claimed, hence the invention as claimed is not placed in the possession of the public in such a way that they would be enabled to make it, let alone ascertain the limits of the scope of protection sought to be claimed.

11. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The present claims recite catalyst compositions that are the combination of the catalyst, an indole compound, and a group 13 alkyl compound. However, the examples in the

specification all disclose that the indole is reacted with a silica support that had been previously only treated with an aluminum alkyl, followed by addition of a fairly generic early transition metal metallocene; there is no disclosure of the actual presence of a group 13 alkyl compound as a compound added to or in the composition mixture, hence it appears as if the claims are not commensurate in scope with the disclosure.

12. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 13, the heterocyclic nitrogen-containing ligand is only coordinated to the group 13 atom; chemical sense would seem to indicate that when a group 13 alkyl is reacted with an indole having an active hydrogen atom, a covalent bond is formed between the indole and the group 13 atom with elimination of an alkane.

In claim 12, begin l. 2 with --an-- and in l. 3 make "alkyls" singular. Claim 15 also has these problems.

In claim 17, l. 4 insert --an-- before "alumoxane", in l. 5 make "alkyls" singular. In the formulas M is only aluminum, thus the symbol for aluminum may as well be used to simplify the claim language; likewise, the value of n may only be 1, thus the variable should be eliminated in formula (b), and O is only oxygen as well as being the universally recognized symbol for oxygen. In formula (c) it is not clear that a monomer (n = 1) would be at all stable. It is also recited that the indole is only contained within the cocatalyst, rather than the indole reacting with formulas (a-c) in the manner recited at the beginning of this numbered paragraph section.

In claims 18 and 19, since closed Markush language is used, "or" should be --and-- in each instance; it is not clear what an "aroyl radical" is, it is not clear what difference if any there is between a carbomoyl and a carbamoyl radical, and it is not clear how a dialkyl radical could serve in a place that appears to require only a single dangling valence.

Further in claim 19, it is not clear how all these radicals having only one free valence can be bonded to both the silica and the alumoxane fragment.

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-16 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Resconi et al., USP 6,608,224 (hereafter referred to as Resconi).

Resconi discloses the invention as claimed (abstract; col. 4, l. 5-30; col. 5, l. 32-58; col. 6, l. 30 to col. 7, l. 10; col. 7, l. 56-67; col. 8, l. 59 to col. 12, l. 59).

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Resconi as cited above.

The disclosure of Resconi has been discussed above.

Resconi lacks disclosure of supporting the claimed catalyst on a support treated with an alkyl aluminum or alumoxane compound.

However, it is conventional in the art of supported metallocene olefin polymerization catalysts to treat the support with an alumoxane or alkyl aluminum compound to convert surface hydroxyls to surface alkyl or aluminum alkyl species.

It would have been obvious to one of ordinary skill in the art to apply that skill to the disclosure of Resconi with a reasonable expectation of obtaining a highly-useful olefin polymerization catalyst with the expected benefit of the catalyst being usable in gas or slurry phase polymerizations.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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AU 1755

10/27/04